

551,049

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/087701 A1

(51) International Patent Classification⁷: C07D 471/04,
491/04, A61K 31/4188, 31/437, A61P 1/04

(74) Agent: RUPP, Herbert; Altana Pharma AG, Byk-Gulden-
Str. 2, 78467 Konstanz (DE).

(21) International Application Number:
PCT/EP2004/050428

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(22) International Filing Date: 2 April 2004 (02.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03007780.4 4 April 2003 (04.04.2003) EP

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): ALTANA
PHARMA AG [DE/DE]; Byk-Gulden-Str. 2, 78467 Kon-
stanz (DE).

(72) Inventors: BUHR, Wilm; Zum Kirchenwald 7, 78465
Konstanz (DE). CHIESA, Vittoria, M.; Alpenstr.
5, 78464 Konstanz (DE). ZIMMERMANN, Peter,
Jan; Zum Lerchental 43/1, 78315 Radolfzell (DE).
BREHM, Christof; Richentalstr. 8, 78462 Konstanz
(DE). PALMER, Andreas; Pirminweg 1a, 78467 Kon-
stanz (DE). POSTIUS, Stefan; Austrasse 4b, 78467
Konstanz (DE). KROMER, Wolfgang; Hinterhauserstr.
5, 78464 Konstanz (DE). SIMON, Wolfgang-Alexander;
Schubertstrasse 17, 78464 Konstanz (DE). SENN-BIL-
FINGER, Joerg; Saentisstrasse 7, 78464 Konstanz (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BUHR, Wilm
[DE/DE]; Zum Kirchenwald 7, 78465 Konstanz (DE).
CHIESA, M., Vittoria [IT/DE]; Alpenstr. 5, 78464
Konstanz (DE). ZIMMERMANN, Peter, Jan [DE/DE];
Zum Lerchental 43/1, 78315 Radolfzell (DE).

Declarations under Rule 4.17:

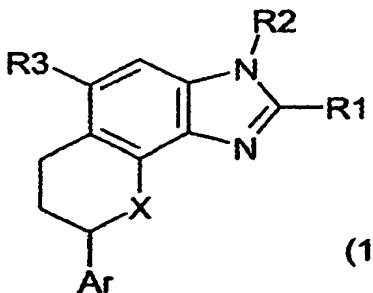
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A1 (54) Title: CYCLIC BENZIMIDAZOLES



(57) Abstract: The invention relates to cyclic benzimidazoles of formula (1), (1) in which the substituents and symbols have the meanings indicated in the description. The compounds have gastric secretion inhibiting and excellent gastric and intestinal protective action properties.

WO 2004/087701